

By



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,168	06/19/2003	Masaomi Ikeda	JP920020044US1	7628

7590 07/05/2005
Hitachi Global Storage Technologies
Intellectual Property Law
5600 Cottle Road (NHGB/014-2)
San Jose, CA 95193

EXAMINER

TZENG, FRED

ART UNIT	PAPER NUMBER
----------	--------------

2651

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/601,168

Applicant(s)

IKEDA ET AL.

Examiner

Fred Tzeng

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-7 and 11-13 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8,9,14 and 15 is/are rejected.
- 7) ☒ Claim(s) 2,10 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-16 are presented for examination.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Track Pitch Information Recording for Seek Control.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1, 4, 8, 9, 14, 15 are rejected under 35 U.S.C. 102(a) as being anticipated by present application admitted prior art, hereafter as AAPA.

RE claim 1, AAPA discloses a data storage device (**see page 1 lines 12-14**) comprising: a disk-like recording medium having pitch information indicating a track pitch recorded in a predetermined area (**see page 2 lines 18-28; i.e., TPI pitch information is saved or recorded in a predetermined data area on the disk**); and a head for scanning the recording medium to read the pitch information, and reading/writing data from/in the recording medium by being subjected to seeking control based on the pitch information (**see page 2 lines 6-28; i.e., data reading/writing executed and subjected to seeking control based on the saved TPI pitch information which scanned by the head**).

RE claim 4, AAPA discloses that the recording medium includes a data track provided by a track pitch consistent with a writing width of the head (**see page 2 lines 6-14; i.e., a data track by a track pitch consistent with head characteristics**).

RE claim 8, AAPA discloses a disk-like recording medium of a data storage device in which a head scans a data track of the recording medium to read/write data (**see page 1 lines 12-14 and page 2 lines 6-10**), comprising: a data area including a data track provided by a track pitch consistent with characteristics of the head (**see page 2 lines 6-14; i.e., reading/writing data to data track in a data area by a track pitch consistent with head characteristics**); and a pitch information recording area having information regarding the track pitch recorded (**see page 2 lines 22-28; i.e., writing TPI pitch information as data in a data area of the disk itself**).

RE claim 9, AAPA discloses that the pitch information recording area is set in an outer periphery of a data area **(see page 2 lines 22-28; i.e., the TPI pitch information written in a data area located in an outer periphery of the disk).**

RE claim 14, AAPA discloses a data reading/writing method of a data storage device for scanning a data track of a recording medium by a head to read/write data **(see page 2 lines 6-14)**, comprising the steps of: reading pitch information indicating a track pitch recorded in a predetermined area of the recording medium by the head **(see page 2 lines 25-27; i.e., the TPI pitch information recorded in the predetermined data area is reached and read by the head)**; executing seeking by control based on the read pitch information **(see page 2 lines 22-28; i.e., after the head reaches the address in which the TPI information has been written, the seeking is executed based on the pitch information read)**; and reading/writing data from/in a predetermined track of the recording medium which is seeking destination **(see page 2 lines 8-10, 22-28).**

RE claim 15, AAPA discloses that in the step of reading the pitch information, the pitch information recorded in a track set in an outer periphery of a data area of the recording medium is read **(see page 2 lines 22-28; i.e., the TPI pitch information written in a data track located in an outer periphery of the disk being read by the head).**

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the present application admitted prior art (AAPA) in view of Koishi (USPN 6,728,070).

RE claim 3, AAPA discloses the invention substantially as claimed. AAPA teaches that the recording medium has the pitch information recorded in track positioned in an outer periphery of a data area (**see page 2 lines 22-28; i.e., the TPI pitch information recorded in data track located in an outer periphery of the disk**).

However, AAPA does not specifically disclose a load/unload mechanism.

Koishi teaches that a load/unload mechanism is well known in the technical field of a magnetic disk drive such as a hard disk drive for loading or unloading a head from a ramp (**see column 1 lines 15-28**).

AAPA and Koishi are combinable because they are from the same field of endeavor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify AAPA by including a load/unload mechanism in order to load or unload a head from a ramp as expressly taught by Koishi at column 1 lines 15-28.

Allowable Subject Matter

8. Claims 2, 10, 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 5-7, 11-13 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter:

Claims 2, 5-7, 10-13 and 16 are allowable over the prior art of record because none of the prior art of record teaches or fairly suggests that writing the pitch information for indicating a track pitch in an area other than a data area on a disk medium, such as servo pattern area.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication from the examiner should be directed to Fred Tzeng whose telephone number is 571-272-7565. The examiner can normally be reached on weekdays from 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 571-273-7565 for After Final communications.

Art Unit: 2651

13. Informal regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Fred F. Tzeng' with a stylized flourish at the end.

Fred F. Tzeng

June 28, 2005